

**ABSTRACT**

**[0120]** This invention is directed to a method of removing dimethyl ether from an olefin stream. The method includes distilling the olefin stream so that the dimethyl ether is separated out of the olefin stream with propane. The olefin stream can then be further distilled to provide a polymer grade ethylene stream and a polymer grade propylene stream, with each stream containing not greater than about 10 wppm dimethyl ether.